

18. (Withdrawn) An ink tank provided with an ink absorbent capable of retaining ink, and a housing having said ink absorbent installed therein and an atmospheric communication port, comprising the following steps of:

making said ink absorbent to be in the same compressed state as at the time of insertion into the ink tank;

cutting said ink absorbent into the inner shape of said ink tank housing; and

inserting said ink absorbent into the ink tank housing under compression.

REMARKS

Claims 1-18 are in the application, with Claims 11-18 having been withdrawn from consideration. Of the claims currently under consideration, Claims 1, 2, 5, 6, and 8 have been amended. Claims 1, 5 and 8 are the independent claims. Reconsideration and further examination are respectfully requested.

Initially, Applicants appreciate the indication that Claims 3, 4 and 10/3 contain allowable subject matter and would be allowed if rewritten into independent form. These claims have not been rewritten into independent form at this time since it is believed that the claims from which Claims 3, 4 and 10 depend are allowable for the reasons given below.

The drawings were objected to under 37 C.F.R. §1.83(a) for failing to show the rib mentioned in Claim 3. In response, Applicants respectfully submit that the rib feature mentioned in Claim 3 need not be shown in the drawings since Claim 3 only defines an orientation of the ink absorbent in the ink tank and since one of ordinary skill in

the art would understand from Claim 3 that the orientation of the rib is on an inner face of the ink tank. As such, it is not necessary to show the rib feature since not only the description in the specification, but also the description in Claim 3 is sufficient given the remaining illustrations in the application. Accordingly, reconsideration and withdrawal of the objection to the drawings are respectfully requested.

Claims 1-10 were rejected under 35 U.S.C. §112 for indefiniteness. In response, Applicants have reviewed and amended the claims to conform more fully with the requirements of §112, with particular attention paid to the points raised in the Office Action. Accordingly, reconsideration and withdrawal of the §112 rejection are respectfully requested.

Claims 1, 2, 5, 8 and 10/2, 5, 8 or 9 were rejected under 35 U.S.C. §102(b) by EP 709 211 (Boyd); and Claims 6, 7 and 10/6 or 7 were rejected under 35 U.S.C. §103 over Boyd in view of U.S. Patent No. 5,509,140 (Koitabashi). Applicants have carefully considered the Examiner's remarks and the cited references and respectfully submit that the claims herein are patentably distinguishable over the cited art for at least the following reasons.

The present invention relates to an ink absorbent arranged within an ink tank of an ink jet cartridge to provide negative pressure within an ink tank containing ink so as to provide proper execution of ink jet recording. In this regard, it is known to have an ink absorbent made of thermoformed foam having at least one or more cut faces in the block of thermoformed absorbent. However, because the cut face of the thermoformed block is no longer flat due to the cut, the cut surface of the absorbent becomes irregular when compressed, creating gaps and air pockets between the face of the ink absorbent and

the inner wall face of an ink tank thereby creating air bubbles. When air is trapped within the negative pressure portion of the ink tank and bubbles are mixed within the ink, a recording quality degrades.

To prevent air gaps and air bubbles between the cut face of a thermoformed absorbent and the inner wall face of the ink tank, the present invention provides an ink absorbent formed of a fiber material having a surface formed at least by thermoforming wherein the ink absorbent has a face structured by a cut face. By using a thermoformed fiber material having a cut face, it is possible to eliminate air gaps and air bubbles from forming within the negative pressure portion of the ink tank in which the ink absorbing member exists.

Thus, with specific reference to the claim language, independent Claim 1 defines an ink absorbent contained in the housing of an ink tank for storing ink in the interior thereof provided with a supply port for leading out ink to the outside, and an atmospheric communication port to be communicated with air outside. The ink absorbent being formed by fiber material having a surface formed at least by thermoforming and the ink absorbent has a face structured by a cut face.

Independent Claim 5, which has not been amended, defines an ink absorbent contained in the housing of an ink for storing ink in the interior thereof provided with a supply port for leading out ink to the outside, and an atmospheric communication port to be communicated with the air outside, being formed by fiber material having a surface formed at least by thermoforming, wherein the face of the ink absorbent facing the plane having the largest area on the inner face of the ink tank is a cut face thereof.

Amended independent Claim 8 defines an ink absorbent contained in the housing of an ink tank for storing ink in the interior thereof provided with a supply port for leading out ink to the outside, and an atmospheric communication port to be communicated with the air outside, being formed by fiber material having a surface formed at least by thermoforming, wherein two faces of the ink absorbent opposite to each other are cut faces.

The applied art of record is not understood to disclose or to suggest the foregoing features. In this regard, Boyd discloses an absorbent arranged within an ink tank wherein the body of the absorbent is made from a polyurethane foam. The urethane foam absorbent is cut to a predetermined shape heated and compressed within the ink tank. However, Boyd does not disclose or suggest an absorbent member which is a thermoformed fiber material. Moreover, Boyd fails to consider or disclose the differences between ink supplied from a thermally formed face and a cut face of a thermally formed absorbent. As such, the inventions of Claims 1, 5 and 8, which disclose a thermoformed fiber member having a thermoformed face and a face arranged by cutting, is not anticipated by the Boyd reference.

The remaining art of record is not understood to disclose anything which would make up for the deficiencies of Boyd. Specifically, Koitabashi discloses an ink tank wherein the inside of the ink tank is divided into a chamber containing an absorbent and a chamber containing ink, both chambers being communicated with each other at a lower end of the wall. However, nowhere does Koitabashi disclose or suggest that the absorbent member contained within the ink tank is made from a thermoformed fiber material. Rather, Koitabashi discloses a urethane foam absorbent. Accordingly, any combination of Koitabashi with Boyd would fail to disclose or to suggest an absorbent member made from

a thermoformed fiber material in which at least one face of the absorbent has a cut face.

Accordingly, Claims 1, 5 and 8 are believed to be allowable.

In view of the foregoing amendments and remarks, the entire application is believed to be in condition for allowance, and such action is respectfully requested at the Examiner's earliest convenience.

INFORMATION DISCLOSURE STATEMENT

Pursuant to 37 C.F.R. § 1.56, Applicants respectfully direct the Examiner's attention to the documents listed below and on the enclosed Form PTO-1449. A copy of each document so listed is enclosed.

U.S. Patent No. 5,742,311

U.S. Patent No. 5,509,140

U.S. Patent No. 6,270,206

Applicants also direct the Examiner's attention to the following U.S. patent applications which have been commonly assigned with this application:

Application No. 09/546,910, filed April 10, 2000 (GAU 1733);

Application No. 09/536,127, filed March 28, 2000 (GAU 2861); and

Application No. 09/337,547, filed June 22, 1999 (GAU 2861).

Since this application has received an Office Action on the merits but has not yet received a final action or a notice of allowance, this Information Disclosure Statement is filed under 37 C.F.R. §1.97(c) and is accompanied by the \$180.00 fee specified at 37 C.F.R. §1.17(p). Consideration of the art cited herein is accordingly deemed proper, and such action is respectfully requested.

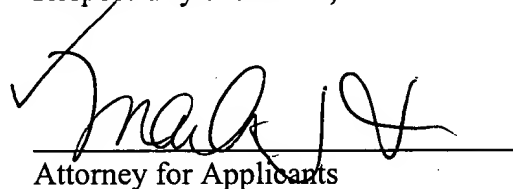
The Examiner is urged to study this information in its entirety and to form an independent determination of the materiality of the information to the claimed

invention. Additionally, the Examiner is requested to indicate that this information has been considered by initialling the appropriate portion of Form PTO-1449.

CONCLUSION

Applicants' undersigned attorney may be reached in our Costa Mesa, California office at (714) 540-8700. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,



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Application No. ##/09/543,331#
Attorney Docket No. 35.C14393

APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE TO CLAIMS

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1. (Amended) An ink absorbent contained in the housing of an ink tank for storing ink in the interior thereof provided with a supply port for leading out ink to the outside, and an atmospheric communication port to be communicated with air outside, being formed by fiber material having a surface formed at least by thermoforming,
wherein the ink absorbent formed by fiber material [having] has a face structured by a cut face.

2. (Amended) An ink absorbent contained in the housing of an ink tank for storing ink in the interior thereof provided with a supply port for leading out ink to the outside, and an atmospheric communication port to be communicated with the air outside, being formed by fiber material having [the] a surface formed at least by thermoforming, wherein the face of said ink absorbent facing said supply port on the inner face of said ink tank is a cut face.

5. (Amended) An ink absorbent contained in the housing of an ink for storing ink in the interior thereof provided with a supply port for leading out ink to the outside, and an atmospheric communication port to be communicated with the air outside, being formed by fiber material having [the] a surface formed at least by thermoforming, wherein

the face of said ink absorbent facing the plane having the largest area on the inner face of said ink tank is [the] a cut face thereof.

6. (Amended) An ink absorbent according to Claim 5, wherein said ink tank comprises a negative pressure generating member installation changer; a liquid storage chamber communicated with said negative pressure generating member installation chamber through a communication [passage] portion to store ink to be supplied to said negative pressure generating member installation chamber substantially closed with the exception of said communication portion; and a partition wall member having said communication [passage] portion, partitioning said negative pressure generating member installation chamber and said liquid storage chamber.

8. (Amended) An ink absorbent contained in the housing of an ink tank for storing ink in the interior thereof provided with a supply port for leading out ink to the outside, and an atmospheric communication port to be communicated with the air outside, being formed by fiber material having [the] a surface formed at least by thermoforming, wherein

two faces of said ink absorbent opposite to each other are [the] cut faces.